

## 03040205-09

(*Black River*)

### General Description

Watershed 03040205-09 (formerly 03040205-150, 180) is located in Williamsburg and Georgetown Counties and consists primarily of the lower ***Black River*** and its tributaries from the crossing of SC Hwy 30 to its confluence with the Great Pee Dee River. The watershed occupies 232,687 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 40.7% forested land, 28.0% forested wetland, 17.4% agricultural land, 7.5% scrub/shrub land, 3.4% urban land, 1.7% nonforested wetland, 1.2% water, and 0.1% barren land.

This section of the Black River accepts drainage from its upper reaches, together with Spring Branch, Spring Gully, Jumping Gully, Thompson Swamp, Birch Creek (Dobson Branch, Dobson Bay), and Gin Branch. Flat Swamp (Camp Pond Bay, Ricefield Bay, Alligator Bay, Log Branch) flows into Johnsons Swamp (Oakridge Bay, Mill Branch, Murray Swamp, Sportsman Pond), which in turn flows into Horse Pen Swamp before draining into the Black River downstream of Gin Branch. Further downstream, Big Dam Swamp (Roper Branch, Sleeper Branch, Cedar Patch Branch, Brightman Swamp) enters the river followed by Lester Creek, Puncheon Creek, and Indian Hut Swamp. Mill Grove Creek enters the river next followed by Lanes Creek, Choppee Creek (Stony Run Creek, Machine Bay), Boheck Creek, and Post Foot Branch. Carvers Bay drains into Big Branch (Millpond Branch), then flows into Carvers Bay Creek, which merges with Fardick Creek to form Peters Creek (Simmons Creek, Guinea Creek, Black Swamp) and drains into the river downstream of Post Foot Branch. Sixmile Creek (Gapway Bay, Greens Creek, Prince Creek, Crooked Branch, Inland Branch) enters the river next followed by Cottage Creek and Longwater Bay. There are a total of 354.3 stream miles, 213.8 acres of lake waters, and 763.3 acres of estuarine areas in this watershed. The Black River, upstream of the crossing of U.S. Hwy. 701 (just upstream of Sixmile Creek), is classified FW\* (Dissolved Oxygen not less than 4.0 mg/l and pH between 5.0 and 8.5) and its tributaries are classified FW. Downstream of the crossing, the Black River and its tributaries are classified SA. The Black River drains into the Great Pee Dee River.

### Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
PD-359	W/INT	FW*	BLACK RIVER AT S-45-30
PD-698	BIO	FW	BURCH CREEK AT S-45-30
PD-694	BIO	FW	JOHNSON SWAMP AT S-45-30
PD-170	W/INT	FW*	BLACK RIVER AT SC 51, 11.6MI NE OF ANDREWS
RS-03353	W/RS03	FW	GREENS CREEK AT S-22-318 (JOHNSON RD), 7.7 MI NW OF GEORGETOWN
PD-325	P/INT	SA	BLACK RIVER AT S-22-489 4 MI NE OF GEORGETOWN

***Black River*** – There are three SCDHEC monitoring sites along this lowest section of the Black River, and recreational uses are fully supported at all sites. This is a blackwater system, characterized by naturally low pH and dissolved oxygen concentration conditions. At the upstream site (***PD-359***), aquatic life uses are fully supported. Although dissolved oxygen

excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter.

At the midstream site (**PD-170**), aquatic life uses are not supported due to dissolved oxygen excursions and occurrences of copper in excess of the aquatic life acute criterion, which is compounded by a significant decreasing trend in dissolved oxygen concentration. There is also a significant increasing trend in total phosphorus concentration. There is a significant increasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. DDE (a metabolite of DDT) was detected in the 1999 sediment sample, and a very high concentration of cadmium and a high concentration of zinc were measured in the 2002 sample. In the 2003 sediment sample, DDE was detected, and very high concentrations of cadmium and lead were measured. Although the use of DDT was banned in 1973, it is very persistent in the environment.

At the downstream site (**PD-325**), aquatic life uses are partially supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in dissolved oxygen concentration. Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. There is a significant increasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters.

**Burch Creek (PD-698)** - Aquatic life uses are fully supported based on macroinvertebrate community data.

**Johnson Swamp (PD-694)** - Aquatic life uses are fully supported based on macroinvertebrate community data.

**Greens Creek (RS-03353)** – This is a blackwater system, characterized by naturally low pH and dissolved oxygen conditions. Although pH and dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations.

Aquatic life uses are fully supported, but recreational uses are partially supported due to fecal coliform bacteria excursions.

*A fish consumption advisory has been issued by the Department for mercury and includes the **Black River** within this watershed (see advisory p.72).*

## Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-011	GB	BLACK CREEK	ANDREWS #2

## Groundwater Quantity

Portions of this watershed fall within the Waccamaw Capacity Use Area and large groundwater uses must be reported (see Capacity Use Program p.27).

## NPDES Program

### *Active NPDES Facilities*

#### *RECEIVING STREAM*

#### *FACILITY NAME*

#### *PERMITTED FLOW @ PIPE (MGD)*

#### *NPDES#*

#### *TYPE*

#### *COMMENT*

BLACK RIVER  
GCW&SD/WEDGEFIELD PLANTATION  
PIPE #: 001 FLOW: 0.4

SC0029505  
MINOR DOMESTIC

BLACK RIVER  
BMCO CONSTRUCTION, INC./WHEELER PIT  
PIPE #: 001 FLOW: M/R

SCG730650  
MINOR DOMESTIC

BLACK RIVER  
BMCO CONSTRUCTION, INC./WHEELER PIT  
PIPE #: 001 FLOW: M/R

SCG730419  
MINOR INDUSTRIAL

INDIAN HUT SWAMP TRIBUTARY  
STONE CONSTRUCTION CO./ANDREWS MINE  
PIPE #: 001 FLOW: M/R

SCG730006  
MINOR INDUSTRIAL

INDIAN HUT SWAMP TRIBUTARY  
INTERNATIONAL PAPER, INC./SAMPIT LUMBER MILL  
PIPE #: 001 FLOW: 0.34

SC0046582  
MINOR INDUSTRIAL

JOHNSONS SWAMP  
TREBOL USA LLC  
PIPE #: 001 FLOW: 0.213

SC0001619  
MINOR INDUSTRIAL  
(ELF ATOCHEM N. A.)

## Nonpoint Source Management Program

### *Land Disposal Activities*

#### **Landfill Facilities**

#### *LANDFILL NAME*

#### *FACILITY TYPE*

#### *PERMIT #*

#### *STATUS*

CM POWELL  
INDUSTRIAL

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CLOSED

GEORGETOWN COUNTY COMPOSTING  
COMPOSTING

221001-3001  
ACTIVE

GEORGETOWN COUNTY  
MUNICIPAL

221001-1102  
ACTIVE

GEORGETOWN COUNTY LANDFILL  
MUNICIPAL

221001-1101  
CLOSED

GEORGETOWN SUBTITLE D LANDFILL  
INDUSTRIAL

IWP-231  
CLOSED

GEORGETOWN COUNTY C&D LANDFILL  
CONSTRUCTION

221001-1201  
INACTIVE

GEORGETOWN COUNTY C&D LANDFILL  
CONSTRUCTION

221001-1202  
ACTIVE

### ***Mining Activities***

***MINING COMPANY***  
***MINE NAME***

***PERMIT #***  
***MINERAL***

STONE CONSTRUCTION CO.  
ANDREWS MINE

0598-89  
SAND

C-PIN INVESTMENTS, INC.  
C-PIN MINE

1685-43  
SAND/CLAY

MCKENZIE  
MCKENZIE MINE

1446-43  
SAND

### **Growth Potential**

There is a low potential for growth in this watershed, which contains the Town of Andrews. Andrews has both water and sewer infrastructure and a rail line, which should allow low to moderate growth. Outside of the Andrews area, the watershed is rural with mostly agricultural and timberland uses. Water is available along most roads in the area, but there is no sewerage infrastructure. Transportation studies are analyzing the possibility of using S.C. Hwy. 701 as an alternate route to U.S. Hwy. 17. If this project is approved and completed, the area along S.C. Hwy. 701 will likely see a significant increase in residential and commercial development.